

Ser. No. 09/974,790

Response to Office Action of 13 February 2003

Atty Docket 117163-29

REMARKS

Claims

Claims 1-60 were pending at the time of the Office Action. The applicant thanks the Examiner for renumbering misnumbered claims 41-59 as 42-60. Of these, claims 1, 2, and 60 have been amended and claims 7-10 have been cancelled.

35 USC §102 Rejections

Fischell et al (US 5,695,516)

Claims 1-60 stand rejected as being anticipated by U.S. Patent 5,695,516 to Fischell et al. ("Fischell '516"). Claims 1 and 60 are independent claims. The applicant traverses this rejection.

Claim 1

While the applicant appreciates that the Examiner has provided annotations to Figs. 1 and 3 of Fischell '516, the applicant also respectfully disagrees with the Examiner's analysis regarding claim 1, at least as amended above.

Claim 1 requires "A stent, in particular a coronary stent, for expansion from a first condition into an expanded second condition in which it holds a vessel in an expanded state." Indeed, Fischell '516 meets this requirement of the preamble.

Claim 1 then requires "a tubular body, a peripheral surface of which is formed by a plurality of support portions that extend in a longitudinal direction of the stent." Fischell '516 also meets this requirement, as determined by the Examiner.

Claim 1 then requires that the support portions comprise "a plurality of bar elements" and "a plurality of connecting bars, extending rectilinearly in the longitudinal direction, that connect the bar elements." The Examiner has pointed these elements out in Figs. 1 and 3, but the applicant does not agree with the Examiner's location of these elements in Fischell '516. Specifically, the Examiner has identified the same thinner piece (14, 14') as both a "bar element" and as a "connecting bar," while ignoring the wider pieces (12, 12') which actually connect the thinner pieces. For this reason, the applicant asserts that the only reasonable reading of Fischell '516 is that pieces 14, 14' are the "bar elements" and pieces 12, 12' are the "connecting bars." The Examiner's analysis is silent as to the role of pieces 12, 12' (the "primed" numbers represent

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their position in the expanded condition). To assist in clarifying this point, the applicant has amended this portion of the claim to require that the connecting bars extend substantially rectilinearly in the longitudinal direction of the stent. Support for this amendment is found in paragraph [0025] of the specification. It is very clear from Fischell '516 that there are no bars in the stent that extend rectilinearly in the longitudinal direction of the stent. In fact, the pieces 12, 12' that applicant would assert correspond to the "connecting bars" of the claim extend rectilinearly in the peripheral direction of the stent.

Claim 1 then proceeds to provide two further important limitations on the stent. The first of these is that "the support portions form a plurality of support portion groups with at least a first support portion and a second support portion in adjacent relationship thereto in a peripheral direction of the stent, the bar elements of which extend in a meander configuration in the longitudinal direction of the stent." Note that if pieces 12, 12' are the "bar elements" (as the Examiner asserts), then they do not extend in a meander configuration in the longitudinal direction of the stent when the stent is in its first, non-deployed condition, since the connecting bars extend substantially in a peripheral direction of the stent.

The second of these important limitations is that "a first engagement point of the connecting bars engages the first support portion and a second engagement point of the connecting bars engages the second support portion, such that the first and second engagement points are spaced apart from each other in the longitudinal direction of the stent and the connecting bars are configured and arranged so the spacing in the longitudinal direction between the first and second engagement points decreases upon expansion of the stent to compensate for a reduction in length of the respective support portions." This limitation is also not met by Fischell '516. Fischell '516 describes the mechanism taught therein as a "Butterfly Expandable to Honeycomb" ("BETH") stent. As stated at Col. 1, lines 30-32, the deployed (expanded) stent is of the same length as the non-deployed stent," and, as shown in Fig. 4 of Fischell '516, the length of the BETH stent initially increases, passes through a maximum and then linearly decreases through the initial length to a length that is shorter than the initial length.

It will be appreciated from the drawings of the present application that the mechanism taught by the present application is a "Bow Tie to Rectangle" stent, with the initially longitudinal connecting bars being pulled into a oblique or diagonal state upon expansion of the stent.

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Claim 60

Claim 60 also stands rejected as being anticipated by Fischell '516. Claim 60 is virtually identical to claim 1, except that it is directed to a catheter that comprises a stent having the same limitations as claim 1. If the amendments and arguments above have distinguished claim 1, then they also distinguish claim 60 for exactly the same reasons.

Claims 2-59

While the applicant certainly appreciates the Examiner's thorough and thoughtful explanation of how the remaining claims (the dependent claims) are each anticipated, the applicant asserts that the allowability of claims 1 and 60 as argued above moots these rejections.

Accordingly, the applicant respectfully requests reconsideration of the rejections based on the claim amendments made above. After such reconsideration, it is urged that allowance of all claims will be in order.

Respectfully submitted,



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